## REMARKS

Please reconsider the application in view of the foregoing amendments and the following remarks.

## Status of Claims

Claims 1-8 are pending in the present application of which claims 1-4 are allowed and claims 5-8 are rejected. Claims 5 and 7 are herein amended. No new matter has been presented.

Applicant greatly appreciates the Examiner's indication of allowed subject matter in claims 1-4.

## Information Disclosure Statement

Applicant notes with appreciation the Examiners thorough consideration of the references cited in the Information Disclosure Statement (IDS) submitted on November 4, 2009.

## Claim Rejections - 35 U.S.C. §103

Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Yoshino** (US 2004/0044428) in view of **Asada** (JP 02-146600).

Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over **Yoshino** (US 2004/0044428) in view of **Asada** (JP 02-146600) in view of **Kuriyama** (JP 09-149157).

**Independent Claims 5**

A prima facie case of obviousness requires that the combination of the cited prior art, coupled with the general knowledge in the field, must provide all of the elements of the claimed invention.

Claim 5, as amended, is drawn to at least … *a third processor unit for changing a detection characteristic of said sensor unit according to the setting state of said sound effect output unit,*

*wherein in said active state when said key operation is detected, said detection characteristic is changed so that the sensor unit detects the sound from which a predetermined frequency component is cut off thereby preventing the sensor from being activated by the sound effect emitted from said sound effect output unit.*

For example, support for amended claim 5 may be found in flowchart of Fig. 4 in flowchart symbols (S53) and (S63). Also, see at least page 12, line 25 to page 13, line 25. More specifically, "**when it is detected in the step S53 that there is a button input event**, if the event is generated by operation of the shutter button 52a, the sound detection function of the main microcomputer 42 is deactivated and the sound control mode is terminated (S59, S61). **If it is detected in the step S59 that the button input event is not generated by operation of the**

**shutter button 52a, a detection characteristic of the sound detection function of the main microcomputer 42 is changed (S63). With a change in the detection characteristic, the sound detection function is performed to detect a sound through the use of a signal from which a high-frequency component, as a main component of an operating sound generated from the speaker 58 according to output of the microphone 40, is cut off.** Then, a process is carried out according to the button input event detected in the step S53 (S65), the driver circuit 56 is instructed to produce an operating sound, and then the operating sound is emitted from the speaker 58 (S67) … **Operating sound generated in the operating sound generation circuit 56 is a high-frequency sound and its detection characteristic is changed in such a manner that the sound detection function of the main microcomputer 42 is performed to detect a sound using a signal from which a high-frequency component is cut off, thereby preventing the sound control function from being activated by the operating sound emitted from the speaker 58.**" (emphasis added).

On page 4, of the Office Action, the Office acknowledges that aforesaid limitation of claim 5 is not taught by Yoshino. Nonetheless, it is alleged Asada discloses these limitations.

Claim 5 has been amended to distinguish over Asada. It should be understood that the invention of the present application is directed to a processor that changes initial detection characteristic (S49, Fig. 4), in which the output of microphone 40 (Fig. 3) is detected **without**

high-frequency cut off characteristic, to another detection characteristic in which the output of microphone 40 (Fig. 3) is detected **with** a high-frequency component cut off characteristic.

**Whereas**, in Asada, when output is not attenuated (high or active state), the input voice signal from microphone 7 is directly outputted to voice recognition part 9, i.e., no synthesized sound inputted from microphone. That is, Asada discloses that the input voice signal from microphone 7 is directly sent to voice recognition part 9 except, during the time when the system is experiencing synthesized sound other than the operator's voice, the input voice signal is attenuated by a specific quantity before sending to voice recognition part 9. By attenuating the voice signal (that is, by lowering the power at which the signal is transmitted), the misrecognition between a synthesized sound and a voice signal (operator's voice) is prevented (Drawing 1 and Abstract).

**In contrast**, in amended claim 5, when the speaker is in active state and a button input event (S53) is detected, the processor changes the frequency characteristics by cutting off the high-frequency component of the sound from the speaker in order to prevent the microphone to become activated by the speaker sound. Furthermore, it is to be noted that the Asada reference is concerned with noise to assure accurate speech recognition and accomplishes it by changing power level (attenuation of amplitude); however, Asada does not teach changing detection characteristics such as cutting off high-frequency component as in claim 5.

Therefore, Asada fails to teach at least *a third processor unit for changing a detection characteristic of said sensor unit according to the setting state of said sound effect output unit, wherein in said active state when said key operation is detected, said detection characteristic is changed so that the sensor unit detects the sound from which a predetermined frequency component is cut off thereby preventing the sensor from being activated by the sound effect emitted from said sound effect output unit* as recited in amended claim 1.

Because the proposed combination of Yoshino and Asada does not teach or suggest all of the claimed elements and limitations in amended claim 5, Applicant respectfully submits that amended claim 5 would not have been obvious over these references. Accordingly, Applicant requests that the rejection under 35 U.S.C. §103 be withdrawn.

In addition, claim 6 is also patentable by virtue of its dependency on claim 5 because it incorporates by reference at least the distinguishable features of claim 5.

**Claim Rejections - 35 U.S.C. §103**

Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over **Yoshino** (US 2004/0044428) in view of **Asada** (JP 02-146600) in view of **Nakada** (JP2003-114697).

**Independent Claims 7**

Claim 7, as amended, is drawn to at least … *a third processor unit for changing an output characteristic of said sound effect output unit according to the setting state of said first controller unit, wherein in said active state when said key operation is detected, said output characteristic is changed so that a predetermined frequency component is cut off from the sound effect emitted by said sound effect output unit thereby preventing the sensor from being activated.*

For example, support for amended claim 7 may be found in flowchart of Fig. 7 (S125) and at least in the corresponding description on pages 18 and 19 of the present specification.

For the similar reasons as discussed above for amended claim 5, it is submitted that Yoshino and Asada also do not disclose a third processor as recited in amended claim 7.

Furthermore, Nakada does not remedy this deficit. This is because, like Asada, Nakada teaches attenuating the level of a signal component in a 100-5KHz frequency band for human speech. Only difference being that Nakada limits attenuating signal (amplitude) only in speech recognition band (100-500 KHz) where the attenuation is larger compared to the rest of the band.

**In contrast**, in amended claim 7, the processor changes the output characteristic of the speaker when the main processor is in active state and when the button input event (S125) is detected so that a high-frequency component is cut off from the sound emitted from speaker to prevent microphone from prematurely activating.

However, Nakada fails to disclose *a third processor unit for changing an output characteristic of said sound effect output unit according to the setting state of said first controller unit, wherein in said active state when said key operation is detected, said output characteristic is changed so that a predetermined frequency component is cut off from the sound effect emitted by said sound effect output unit thereby preventing the sensor from being activated* as recited in claim 7.

Because the proposed combination of Yoshino, Asada and Nakada does not teach or suggest all of the claimed elements and limitations in amended claim 7, Applicant respectfully submits that amended claims 7-8 would not have been obvious over these references. Accordingly, Applicant requests that the rejection under 35 U.S.C. §103 be withdrawn.

In addition, claim 8 is at least patentable by virtue of its dependency on claim 7 because it incorporates by reference at least the distinguishable features of claim 7.

## Conclusion

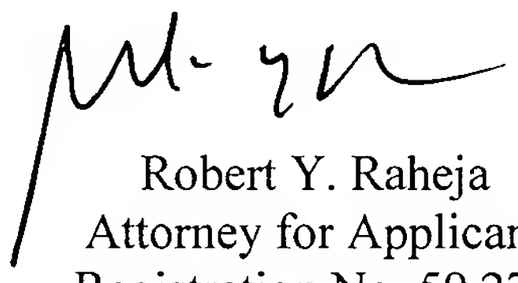
The Claims have been shown to be allowable over the prior art. Applicant believes that this paper is responsive to each and every ground of rejection cited in the Office Action dated November 16, 2009, and respectfully requests favorable action in this application. The Examiner

is invited to telephone the undersigned, applicant's attorney of record, to facilitate advancement of the present application.

If this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

**WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP**



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